REMARKS

The Office Action is responded to by corresponding paragraph numbers but in somewhat different order.

1. It is noted that the drawings are acceptable.

7. Claims 6, 8, 10 and 15 are allowed. Claims 4, 14 and 17 are considered to contain allowable subject matter. Claim 4 has been rewritten as new independent claim 18; claim 19 has been rewritten as new independent claim 20, and claim 17 has been rewritten as new independent claim 21. A new claim 19 is added, which depends from allowable claim 18. All of claims 18-21 should be allowable.

2. Claims 2, 3, 7, 13 and 16 are rejected as being improper dependent claims in that they do not further limit the subject matter of the previous claim or claims from which each depends.

Claims 2 and 3 are cancelled without prejudice. Claim 7 depends from allowed claim 6 and also has been indicated to contain allowable subject matter. Therefore, it is retained. Claims 13 and 16 are cancelled without prejudice.

Claims 16 and 17 are objected to as being duplicates. These claims were improperly numbered in the last amendment and should have been dependent from other claims. In any event, claim 16 is cancelled without prejudice and claim 17 is made dependent from claim 15. This objection should be obviated.

4.&5. Claims 1-3, 5 and 9 stand rejected as being unpatentable over Unal, et al., U.S. 5,734,165. As noted above, claims 2 and 3 have been cancelled without prejudice.

Claim 1 has been amended to incorporate the feature that a material forming the first and second concave mirrors is different from a material forming the substrate. Support for this is found at page 8, line 4 of the specification which teaches that the concave mirrors 20 and 21 are formed of sodium carbonate glass, and the description on page 8, lines 6-8 of the Specification teaches that the substrate 22 is formed of a material comprising aluminum mixed with ceramic.

The present invention, as set forth in claim 1, employs a structure in which the material forming the concave mirrors is different from the material forming the substrate. Consider that a material such as aluminum which is lightweight and easily worked is suitable for the material of the substrate (page 3, last paragraph of the Specification), and that a heat-resistant glass such as Pyrex glass is suitable for material of the concave mirrors (page 4, first paragraph of the Specification). Under such restrictions of different materials for the mirrors and substrate, the invention as set forth in claim 1 employs a structure in which the coefficients of linear expansion of both of the concave mirrors are approximately the same as the coefficient of linear expansion of a material forming the substrate as recited in presently pending claim 1.

The problem pointed out in the description on page 3, fourth paragraph to page 5, fourth paragraph of the Specification of the present application is unique to monochromators in which a material forming the concave mirrors is different from a material forming the substrate. Applicant's monochromator solves this problem by choosing different material for the mirrors and substrate but with the different materials having substantially the same coefficient of linear expansion. therefore, the device is made more accurate with the added advantage of structural integrity due to the different materials.

In contrast, Unal merely discloses a structure in which the elements 2 to 6 are integrated with the base plate 1 as shown in Fig. 1 (column 3, last three lines). Specifically, Unal describes "The base plate (1) together with the elements (2) and (6) fixedly arranged thereon form the microstructured single-piece shaped part." [emphasis added] Therefore, the material forming the elements 2 to 6 is the same as the material forming the base plate. Unal does not recognize the problem sought to be solved by the present invention and therefore does not offer the novel solution as set forth in claim 1.

Accordingly, claim 1 and its dependent claims 5 and 9 patentably distinguish over Unal and should be allowed.

6. Claims 12, 13 and 16 are rejected over Unal in view of Rajic, et al., U.S. 5,754,290. Claims 13 and 16 have been cancelled without prejudice. Claim 12 depends from claim 1 and recites that the mirrors are of glass. Rajic merely discloses a spectrometer which employs an

integrated structure as can be understood from the figures and the title of the invention "monolithic spectrometer". Therefore, the materials of the elements forming the spectrometer are the same.

As described above, Unal and Rajic employ monolithic structures, so that the above problem pointed out in the Specification of the present application would not be motivated by Unal and Rajic. In addition, it is obvious that Unal and Rajic neither disclose nor suggest the structure of the present invention in which a material forming the concave mirrors is different from a material forming the substrate, which has been motivated by the above problem.

Accordingly, claim 12 also is patentable and should be allowed.

The foregoing amendment clearly places the application in condition for allowance.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Prompt and favorable action is requested.

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Respectfully submitted,

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